

09/825,244

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DATE: Monday, March 18, 2002 [Printable Copy](#) [Create Case](#)

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DB=USPT,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ

<u>L2</u>	L1 and (nucleic acid or polynucleotide or oligonucleotide)	19	<u>L2</u>
<u>L1</u>	link\$ near5 ester near5 esterase near5 cleav\$	33	<u>L1</u>

END OF SEARCH HISTORY

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L2: Entry 19 of 19

File: USPT

Jul 18, 1989

DOCUMENT-IDENTIFIER: US 4849357 A

TITLE: Method for the preparation of a hydrophobic enzyme-containing composition and the composition produced thereby

Brief Summary Paragraph Right (12):

Any hydrophilic, or water-soluble, enzymes can be employed in the composition and method of the present invention, including hydrolases, oxidoreductases (glucose oxidase, xanthic oxidase, amino acid oxidase), transferases (transglycosidases, transphosphorylases, phosphomutases, transaminases, transmethylases, transacetylases), desmolases (ligases, lyases) and isomerases (racemases, cis-trans isomerases) and the like. Of these enzymes, the hydrolases are preferred for use in the present compositions. Hydrolases catalyze a wide variety of hydrolytic reactions, including (a) the cleavage of ester linkages (esterases such as lipases, phosphoric mono- and di-esterhydrolases such as phosphatases), (b) the cleavage of glycosides (carbohydrases such as polysaccharidases, e.g., levan hydrolase, cellulase, amylase, ligninolase and the like). (c) the cleavage of peptide linkages (proteases such as alpha-aminopeptide amino acid hydrolases, alpha-carboxypeptide amino acid hydrolases) and the cleavage of nucleic acids (nucleases).

19/30044

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NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2	Sep 17	IMSworld Pharmaceutical Company Directory name change to PHARMASEARCH
NEWS	3	Oct 09	Korean abstracts now included in Derwent World Patents Index
NEWS	4	Oct 09	Number of Derwent World Patents Index updates increased
NEWS	5	Oct 15	Calculated properties now in the REGISTRY/ZREGISTRY File
NEWS	6	Oct 22	Over 1 million reactions added to CASREACT
NEWS	7	Oct 22	DGENE GETSIM has been improved
NEWS	8	Oct 29	AAASD no longer available
NEWS	9	Nov 19	New Search Capabilities USPATFULL and USPAT2
NEWS	10	Nov 19	TOXCENTER(SM) - new toxicology file now available on STN
NEWS	11	Nov 29	COPPERLIT now available on STN
NEWS	12	Nov 29	DWPI revisions to NTIS and US Provisional Numbers
NEWS	13	Nov 30	Files VETU and VETB to have open access
NEWS	14	Dec 10	WPINDEX/WPIDS/WPIX New and Revised Manual Codes for 2002
NEWS	15	Dec 10	DGENE BLAST Homology Search
NEWS	16	Dec 17	WELDASEARCH now available on STN
NEWS	17	Dec 17	STANDARDS now available on STN
NEWS	18	Dec 17	New fields for DPCI
NEWS	19	Dec 19	CAS Roles modified
NEWS	20	Dec 19	1907-1946 data and page images added to CA and CPlus
NEWS	21	Jan 25	BLAST(R) searching in REGISTRY available in STN on the Web
NEWS	22	Jan 25	Searching with the P indicator for Preparations
NEWS	23	Jan 29	FSTA has been reloaded and moves to weekly updates
NEWS	24	Feb 01	DKILIT now produced by FIZ Karlsruhe and has a new update frequency
NEWS	25	Feb 19	Access via Tymnet and SprintNet Eliminated Effective 3/31/02
NEWS	26	Mar 08	Gene Names now available in BIOSIS
NEWS EXPRESS	February 1 CURRENT WINDOWS VERSION IS V6.0d, CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP), AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002		
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FILE 'HOME' ENTERED AT 15:11:29 ON 18 MAR 2002

=> file uspat biosis caplus medline

'USPAT' IS AN AMBIGUOUS FILE OR CLUSTER NAME

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=> uspatful biosis caplus medline

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"HELP COMMANDS" at an arrow prompt (=>).

=> s link?(10a)(amino acid1 or peptide#1)(10a)cleav?

1 IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.

For a list of commands available to you in the current file, enter

"HELP COMMANDS" at an arrow prompt (=>).

=> s link?(10a)(amino acid# or peptide#)(10a)cleav?

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=> file biosis caplus medline

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SINCE FILE

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ENTRY

SESSION

FULL ESTIMATED COST

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1.20

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FILE 'CAPLUS' ENTERED AT 15:15:56 ON 18 MAR 2002

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FILE 'MEDLINE' ENTERED AT 15:15:56 ON 18 MAR 2002

=> s link#(10a)(amino acid# or peptide#) (10a)cleav?

L1 94 LINK#(10A) (AMINO ACID# OR PEPTIDE#) (10A) CLEAV?

=> s link#(10a)(amino acid# or peptide# or oligosaccharide#)(10a)cleav?

L2 106 LINK#(10A) (AMINO ACID# OR PEPTIDE# OR OLIGOSACCHARIDE#) (10A) CLEAV?

=> s l2 and (oligonucleotide# or nucleic acid# or polypeptide#)

L3 5 L2 AND (OLIGONUCLEOTIDE# OR NUCLEIC ACID# OR POLYPEPTIDE#)

=> d l3 1-5 bib ab

L3 ANSWER 1 OF 5 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 1991:453681 BIOSIS

DN BA92:98461

TI CLEAVAGE OF VASOACTIVE INTESTINAL PEPTIDE AT MULTIPLE SITES BY AUTOANTIBODIES.

AU PAUL S; MEI S; MODY B; EKLUND S H; BEACH C M; MASSEY R J; HAMEL F

CS DEP. PHARMACOL., BIOCHEM. INTERNAL MED., UNIVERSITY NEBRASKA MEDICAL

CENTER, OMAHA, NEBR. 68198-16134.
 SO J BIOL CHEM, (1991) 266 (24), 16128-16134.
 CODEN: JBCHA3. ISSN: 0021-9258.
 FS BA; OLD
 LA English
 AB Vasoactive intestinal peptide (VIP) fragments generated by autoantibodies purified from the blood of two human beings were separated and sequenced. Based on the identity of these fragments, seven peptide bonds cleaved by the antibodies were identified. Six of the seven scissile bonds are clustered in the region of VIP spanning residues 14-22 and were cleaved by antibodies from both human subjects. The seventh scissile bond is located at residues 7-8 and was **cleaved** by antibodies from one of the subjects. The scissile bonds **link amino acid** residues with different size, charge, and hydrophobicity. The hydrolytic activity of the antibodies was selective in that they failed to hydrolyze **polypeptide** unrelated in sequence to VIP (insulin and atrial natriuretic peptide). These observations demonstrate substrate specific hydrolysis by naturally occurring antibodies and expand the range of peptide bonds hydrolyzed by these antibodies.

L3 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2002 ACS
 AN 1999:614079 CAPLUS
 DN 131:225480

TI A protease-activated reporter enzyme for screening for proteases, their cleavage sites, and cellular regulators of proteinase activity
 IN Hay, Bruce A.; Hawkins, Christine V.
 PA California Institute of Technology, USA
 SO PCT Int. Appl., 64 pp.
 CODEN: PIXXD2

DT Patent
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9947640	A1	19990923	WO 1999-US6070	19990319
	W: CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				

PRAI US 1998-78721P P 19980320
 US 1999-270983 A 19990317

AB A method of screening for proteinase activity using the enzyme to activate a reporter enzyme is described. The inactive form of the reporter enzyme has a repressor **polypeptide** that inhibits it fused via a proteinase-labile linker peptide to the catalytic moiety. Cleavage of the linker **polypeptide** at the protease cleavage site liberates the reporter activity. The method can also be used to study sequence requirements for specific proteinases and for screening for proteinase inhibitors. The method can be conducted in vivo using expression constructs, i.e. reporter genes, for the reporter enzyme fusion protein. In the case of enzymes such as caspases, physiol. regulators of the enzyme can also be detected. A caspase reporter system using a linker **peptide** contg. **cleavage** sites for granzyme B and other caspases to **link** an N-terminal domain from human CD4 antigen and a C-terminal domain that is a transcription factor contg. the LexA binding domain was constructed for use in a yeast expression host. The expression host also contained a lacZ reporter under control of a LexA-responsive promoter. The fusion protein is membrane bound by the CD4 moiety and cleavage liberates the transcription factor to drive expression of the reporter gene. The proteinase gene can be under control of its own promoter or of a chem. inducible promoter as necessary.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2002 ACS

AN 1950:33320 CAPLUS
 DN 44:33320
 OREF 44:6390d-h
 TI New synthesis of **polypeptides** by condensation of amides of hydroxy acids
 AU Bresler, S. E.; Selezneva, N. A.
 CS Leningrad Phys. Tech. Inst., Acad. Sci., U.S.S.R.
 SO Zhur. Obshchei Khim. (J. Gen. Chem.) (1950), 20, 356-00
 DT Journal
 LA Unavailable
 AB AcNH2 (40 g.) in 100 ml. abs. EtOH refluxed 20-30 min. with 11.5 g. EtONa gave a cryst. product which was taken up in more EtOH and satd. with dry HCl, filtered, and evapd., yielding 100% AcNH₂-HCl, m. 59.degree.. No by-products were detected. Hence the reaction was applied to the derivs. of HO acids to form polymeric products. Lactic acid was converted by treatment of the Et ester with NH₃ into the amide which, boiled with Na in dioxane, yielded the Na deriv., MeCH(ONa)CONH₂, m. 26.degree.. The product (8 g.) heated in an evacuated tube 3-4 weeks to 80.degree. gave a transparent resin, which was treated in EtOH with dry HCl, filtered, and evapd., yielding a clear resin, decomp. 105.degree. without melting; it is sol. in H₂O, less in EtOH, insol. in Et₂O, dioxane, or Me₂CO. Condensation for 5-7 days gives a softer resin. Condensation of the free amide with metallic Na at 110.degree. gave a dark product and considerable NH₃. Hydrolysis of the product by alc. aq. HCl at 33.degree. in 22 hrs. gave 40% **cleavage** of the **peptide links**, while pancreatin gave 45% hydrolysis in 10 hrs. In both cases alanine was the end product, hence the resin was a **polypeptide** of polyalanine type. Adsorption on charcoal and refractometric examn. of the soln. established the polymeric nature of the product and its hydrolyzates. Polarimetric examn. showed 89% retention of the L-configuration. Mol. wt. by viscosity detns. gave 5000-6000 av. mol. wts.

L3 ANSWER 4 OF 5 MEDLINE
 AN 97238549 MEDLINE
 DN 97238549 PubMed ID: 9131999
 TI Chemical cross-linking of the human immunodeficiency virus type 1 Tat protein to synthetic models of the RNA recognition sequence TAR containing site-specific trisubstituted pyrophosphate analogues.
 AU Naryshkin N A; Farrow M A; Ivanovskaya M G; Oretskaya T S; Shabarova Z A; Gait M J
 CS Laboratory of Molecular Biology, Medical Research Council, Cambridge, U.K.
 SO BIOCHEMISTRY, (1997 Mar 25) 36 (12) 3496-505.
 Journal code: A0G; 0370623. ISSN: 0006-2960.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199704
 ED Entered STN: 19970507
 Last Updated on STN: 19970507
 Entered Medline: 19970429

AB A chemical ligation procedure has been developed for the synthesis of oligoribonucleotides carrying a trisubstituted pyrophosphate (tsp) linkage in place of a single phosphodiester. Good yields of tsp were obtained when a single 2'-deoxynucleoside 5' to the tsp was used in the ligation reaction. A tsp linkage was found to be reasonably stable to hydrolysis but cleaved by treatment with ethylenediamine or lysine to give phosphoamidate adducts. A model human immunodeficiency virus type 1 (HIV-1) TAR RNA duplex containing an activated tsp was able to bind to HIV-1 Tat protein with only 3-fold reduced affinity and to a Tat peptide (residues 37-72) with identical affinity compared to that of an unmodified duplex. Tsps incorporated at sites previously identified as being in close proximity to Tat protein were able to cross-link to Tat

peptide (37-72) to form a covalent phosphoamidate conjugate. Endopeptidase **cleavage** followed by MALDI-TOF (matrix-assisted laser desorption ionization time of flight) mass spectrometric analysis provided strong evidence that a TAR duplex containing a tsp replacing the phosphate at 38-39 had reacted specifically with Lys51 in the basic region of Tat peptide (37-72). The new chemical cross-linking method may be generally useful for identifying lysines in close proximity to phosphates in basic RNA-binding domains of proteins.

L3 ANSWER 5 OF 5 MEDLINE
 AN 91340765 MEDLINE
 DN 91340765 PubMed ID: 1874750
 TI Cleavage of vasoactive intestinal peptide at multiple sites by autoantibodies.
 AU Paul S; Mei S; Mody B; Eklund S H; Beach C M; Massey R J; Hamel F
 CS Department of Pharmacology, University of Nebraska Medical Center, Omaha 68198-6260.
 NC 40348
 44126
 SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1991 Aug 25) 266 (24) 16128-34.
 Journal code: HIV; 2985121R. ISSN: 0021-9258.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199109
 ED Entered STN: 19911013
 Last Updated on STN: 19911013
 Entered Medline: 19910926
 AB Vasoactive intestinal peptide (VIP) fragments generated by autoantibodies purified from the blood of two human beings were separated and sequenced. Based on the identity of these fragments, seven peptide bonds cleaved by the antibodies were identified. Six of the seven scissile bonds are clustered in the region of VIP spanning residues 14-22 and were cleaved by antibodies from both human subjects. The seventh scissile bond is located at residues 7-8 and was **cleaved** by antibodies from one of the subjects. The scissile bonds **link amino acid** residues with different size, charge, and hydrophobicity. The hydrolytic activity of the antibodies was selective in that they failed to hydrolyze **polypeptides** unrelated in sequence to VIP (insulin and atrial natriuretic peptide). These observations demonstrate substrate specific hydrolysis by naturally occurring antibodies and expand the range of peptide bonds hydrolyzed by these antibodies.

=> s l2 and (oligonucleotide# or polynucleotide# or nucleic acid#)
 2 FILES SEARCHED...

L4 3 L2 AND (OLIGONUCLEOTIDE# OR POLYNUCLEOTIDE# OR NUCLEIC ACID#)

=> d l4 1-3 bib ab

L4 ANSWER 1 OF 3 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1996:70626 BIOSIS
 DN PREV199698642761
 TI Identification of the nicking tyrosine of geminivirus Rep protein.
 AU Laufs, Juergen; Schumacher, Silke; Geisler, Norbert; Jupin, Isabelle; Gronenborn, Bruno (1)
 CS (1) Inst. Sci. Vegetales, CNRS, Ave. de la Terrasse, 91198 Gif sur Yvette Cedex France
 SO FEBS Letters, (1995) Vol. 377, No. 2, pp. 258-262.
 ISSN: 0014-5793.
 DT Article
 LA English
 AB The replication initiator (Rep) proteins of geminiviruses perform a DNA

cleavage and strand transfer reaction at the viral origin of replication. As a reaction intermediate, Rep proteins become covalently linked to the 5' end of the cleaved DNA. We have used tomato yellow leaf curl virus Rep protein for in vivo and in vitro analyses. Isolating a covalent peptide-nucleotide complex, we have identified the **amino acid** of Rep which mediates **cleavage** and **links** the protein to DNA. We show that tyrosine-103, located in a conserved sequence motif, initiates DNA cleavage and is the physical link between geminivirus Rep protein and its origin DNA.

L4 ANSWER 2 OF 3 MEDLINE
 AN 2000060989 MEDLINE
 DN 20060989 PubMed ID: 10595540
 TI Mapping of ATP binding regions in poly(A) polymerases by photoaffinity labeling and by mutational analysis identifies a domain conserved in many nucleotidyltransferases.
 AU Martin G; Jenö P; Keller W
 CS Department of Cell Biology, Biozentrum, University of Basel, Switzerland.
 SO PROTEIN SCIENCE, (1999 Nov) 8 (11) 2380-91.
 Journal code: BNW; 9211750. ISSN: 0961-8368.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200001
 ED Entered STN: 20000124
 Last Updated on STN: 20000124
 Entered Medline: 20000107
 AB We have identified regions in poly(A) polymerases that interact with ATP. Conditions were established for efficient cross-linking of recombinant bovine and yeast poly(A) polymerases to 8-azido-ATP. Mn²⁺ strongly stimulated this reaction due to a 50-fold lower K_i for 8-azido-ATP in the presence of Mn²⁺. Mutations of the highly conserved Asp residues 113, 115, and 167, critical for metal binding in the catalytic domain of bovine poly(A) polymerase, led to a strong reduction of cross-linking efficiency, and Mn²⁺ no longer stimulated the reaction. Sites of 8-azido-ATP cross-linking were mapped in different poly(A) polymerases by CNBr-**cleavage** and analysis of tryptic **peptides** by mass spectroscopy. The main cross-**link** in Schizosaccharomyces pombe poly(A) polymerase could be assigned to the peptide DLELSDNNLLK (amino acids 167-177). Database searches with sequences surrounding the cross-link site detected significant homologies to other nucleotidyltransferase families, suggesting a conservation of the nucleotide-binding fold among these families of enzymes. Mutations in the region of the "helical turn motif" (a domain binding the triphosphate moiety of the nucleotide) and in the suspected nucleotide-binding helix of bovine poly(A) polymerase impaired ATP binding and catalysis. The results indicate that ATP is bound in part by the helical turn motif and in part by a region that may be a structural analog to the fingers domain found in many polymerases.

L4 ANSWER 3 OF 3 MEDLINE
 AN 97238549 MEDLINE
 DN 97238549 PubMed ID: 9131999
 TI Chemical cross-linking of the human immunodeficiency virus type 1 Tat protein to synthetic models of the RNA recognition sequence TAR containing site-specific trisubstituted pyrophosphate analogues.
 AU Naryshkin N A; Farrow M A; Ivanovskaya M G; Oretskaya T S; Shabarova Z A; Gait M J
 CS Laboratory of Molecular Biology, Medical Research Council, Cambridge, U.K.
 SO BIOCHEMISTRY, (1997 Mar 25) 36 (12) 3496-505.
 Journal code: A0G; 0370623. ISSN: 0006-2960.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)

LA English
 FS Priority Journals
 EM 199704
 ED Entered STN: 19970507
 Last Updated on STN: 19970507
 Entered Medline: 19970429

AB A chemical ligation procedure has been developed for the synthesis of oligoribonucleotides carrying a trisubstituted pyrophosphate (tsp) linkage in place of a single phosphodiester. Good yields of tsp were obtained when a single 2'-deoxynucleoside 5' to the tsp was used in the ligation reaction. A tsp linkage was found to be reasonably stable to hydrolysis but cleaved by treatment with ethylenediamine or lysine to give phosphoamidate adducts. A model human immunodeficiency virus type 1 (HIV-1) TAR RNA duplex containing an activated tsp was able to bind to HIV-1 Tat protein with only 3-fold reduced affinity and to a Tat peptide (residues 37-72) with identical affinity compared to that of an unmodified duplex. Tsps incorporated at sites previously identified as being in close proximity to Tat protein were able to cross-link to Tat peptide (37-72) to form a covalent phosphoamidate conjugate. Endopeptidase cleavage followed by MALDI-TOF (matrix-assisted laser desorption ionization time of flight) mass spectrometric analysis provided strong evidence that a TAR duplex containing a tsp replacing the phosphate at 38-39 had reacted specifically with Lys51 in the basic region of Tat peptide (37-72). The new chemical cross-linking method may be generally useful for identifying lysines in close proximity to phosphates in basic RNA-binding domains of proteins.

=> d 14 1-3 kwic

L4 ANSWER 1 OF 3 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AB. . . curl virus Rep protein for in vivo and in vitro analyses. Isolating a covalent peptide-nucleotide complex, we have identified the amino acid of Rep which mediates cleavage and links the protein to DNA. We show that tyrosine-103, located in a conserved sequence motif, initiates DNA cleavage and is the. . .
 IT Miscellaneous Descriptors
 DNA CLEAVAGE; PROTEIN-NUCLEIC ACID INTERACTION;
 REPLICATION INITIATION; 103-TYROSINE

L4 ANSWER 2 OF 3 MEDLINE
 AB. . . cross-linking efficiency, and Mn2+ no longer stimulated the reaction. Sites of 8-azido-ATP cross-linking were mapped in different poly(A) polymerases by CNBr-cleavage and analysis of tryptic peptides by mass spectroscopy. The main cross-link in Schizosaccharomyces pombe poly(A) polymerase could be assigned to the peptide DLELSDNNLLK (amino acids 167-177). Database searches with sequences surrounding. . .

CT . . .
 Sequence Data

Mutagenesis, Site-Directed
 Nucleotidyltransferases: CH, chemistry
 Nucleotidyltransferases: ME, metabolism
 Peptide Fragments: CH, chemistry
 Peptide Fragments: ME, metabolism
 Peptide Mapping
 *Polynucleotide Adenylyltransferase: CH, chemistry
 *Polynucleotide Adenylyltransferase: ME, metabolism
 Protein Conformation
 Recombinant Proteins: CH, chemistry
 Recombinant Proteins: ME, metabolism
 Schizosaccharomyces: EN, enzymology
 Sequence Alignment
 Sequence Homology, . . .

CN 0 (Affinity Labels); 0 (Azides); 0 (Peptide Fragments); 0 (Recombinant Proteins); EC 2.7.7 (Nucleotidyltransferases); EC 2.7.7.19 (**Polynucleotide** Adenylyltransferase)

L4 ANSWER 3 OF 3 MEDLINE

AB . . . an unmodified duplex. Tsps incorporated at sites previously identified as being in close proximity to Tat protein were able to cross-link to Tat **peptide** (37-72) to form a covalent phosphoamidate conjugate. Endopeptidase **cleavage** followed by MALDI-TOF (matrix-assisted laser desorption ionization time of flight) mass spectrometric analysis provided strong evidence that a TAR duplex. .

CT . . .

Products, tat: CS, chemical synthesis

*Gene Products, tat: ME, metabolism

*HIV Long Terminal Repeat

*HIV-1

*Models, Chemical

Molecular Sequence Data

Oligonucleotides: CS, chemical synthesis

Oligonucleotides: CH, chemistry

Peptide Fragments: CH, chemistry

Peptide Fragments: ME, metabolism

*RNA, Viral: ME, metabolism

Spectrometry, Mass, Matrix-Assisted Laser Desorption-Ionization

CN 0 (Cross-Linking Reagents); 0 (Diphosphates); 0 (Gene Products, tat); 0 (**Oligonucleotides**); 0 (Peptide Fragments); 0 (RNA, Viral)

=>